

REMARKS

This response includes proposed drawing corrections. These corrections are also being sent with a transmittal letter to the Official Draftsperson. The Examiner has objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(5) because they include reference signs not mentioned in the description. These reference signs are removed in the proposed drawing corrections. The Examiner also objected to the drawings because “a bracket should embrace figures 1 and 4.” This change is included in the proposed corrections. The Examiner also objected to the drawings because reference signs 62, 102a, and 102b were mentioned in the description but not shown in the drawings. Reference signs 102a and 102b are added to figure 8. Reference sign 62 has been removed from the specification. No new matter was added with this change. Applicants request that the Examiner withdraw the objections to the drawings.

The Examiner has objected to the disclosure because of informalities. The disclosure has been amended in accord with the Examiner’s suggestions. Applicants request that the Examiner withdraw the objections to the disclosure.

Claims 1-22 are pending in the application. Claims 1-22 stand rejected. The Examiner has rejected claims 7-17 under 35 U.S.C. 112, second paragraph, as being indefinite. The Examiner states that insufficient antecedent basis for the limitation “the joint” in claims in claims 7 and 13. Applicants have removed this phrase from the preamble of these two claims. These amendments do not narrow claims 7 or 13. Applicants request withdrawal of this rejection.

The Examiner has rejected claims 1, 2, 4-8, 10-14, and 16-22 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,170,883 (Mattsson et al.). Applicants respectfully traverse this rejection. *Mattsson* discloses an invention with an object of providing “a tubular element with improved sealing means.” Col. 2, lns. 12-13. *Mattsson* discloses a system “for

reliable fastening **of the sealing means on the tubular body.**” Col. 2, lns. 18-119, emphasis added. The Examiner has referred to the “locking mechanism” of claim 1 as being met by item 13 of *Mattsson*. Yet in *Mattsson* the “further lip 15 is bent down together with the flange 18 and clamped against the sealing ring base 13.” Col. 4, lns. 62-64. This clamping is of the sealing ring to the tube to which it is originally mounted. Nowhere does *Mattsson* teach or suggest “a flexible seal and **locking mechanism** retained on said male end of said first duct ... said flexible seal and **locking mechanism** expanding into said second bead to form both a seal and a **mechanical lock that provides resistance to the separation of said first duct and said second duct...**” as recited in claim 1, emphasis added. Applicants assert that claim 1 is thus patentable over the cited reference. Claims 2 and 4-6 are patentable for at least the reason of their dependence on claim 1. (Claim 5 is amended solely to correct a typographic error).

Independent claims 7 and 13 are patentable over the cited reference at least for substantially the same reasons as claim 1. Claims 8 and 10-12 are patentable at least for the reason of their dependence on claim 7. (Claim 11 is amended solely to correct a typographic error) Claims 14, 16, and 17 are patentable at least for the reason of their dependence on claim 13.

Similarly, nowhere does *Mattsson* teach or suggest “means for providing a seal and a **mechanical connection between said first duct and said second duct...**” as recited in claim 18. No such function, much less the attendant structure, is disclosed in *Mattsson*. (Claim 18 and dependent Claims 19-21 are amended solely to improve their form).

Applicants assert that claim 18 is thus patentable over *Mattsson*. Claims 19-22 are patentable for at least the reason of their dependence on claim 18.

Applicants thus request withdrawal of the rejection of claims 1, 2, 4-8, 10-14, and 16-22 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent 6,170,883 (*Mattsson et al.*).

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The Examiner has rejected claims 3, 9, and 15 under 35 U.S.C. 103(a) as being unpatentable over *Mattsson et al.* Applicants assert that claims 3, 9, and 15 are patentable based upon the arguments provided above.

Applicants believe that claims 1-22 are in condition for allowance and request allowance of all claims. Should the Examiner have any questions about this response, the Examiner is invited to call the undersigned at (408) 453-9200.

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Respectfully submitted,


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IN THE SPECIFICATION

As shown in Fig. 5, duct joining system 50 includes a band clamp 54 that is used to hold flexible duct 52 securely on fitting 60 once flexible duct 52 is slipped over fitting 60. In another embodiment, band clamp 54 is not used with duct joining system 50. The resistance provided by the angled flexible gasket [62] pressing against flexible duct 52 is sufficient to fasten flexible duct 52 to fitting 60.

Female end 106 has an increased diameter portion 114 to accommodate raised bead 108 as the male end 104 is inserted into the female end 106 over raised bead 108 and flexible gasket 102. As shown in Fig. 8, the inside wall 115 of portion 114 contacts raised bead 108 when the male end and female ends are joined. In addition, the outer end of portion 114, which can include angled lip 116 to ease insertion of the male end 104 into female end 106 and to prevent damage to flexible gasket 102 during insertion, contacts raised bead 110. Thus, raised beads 108 and 110 both act as stop beads to prevent male end 104 from being inserted too far into female end 106. Of course, if desired, raised beads 108, 110 may act together or independently as stop beads.

Female end 106 also includes a raised bead 118 that accommodates flexible gasket 102 once the male end 104 is joined with the female end 106. Flexible gasket 102 should press against the top surface 118a or the side walls 118b or 118c of raised bead 118 to create a relatively air-tight seal. In addition, flexible gasket 102 and raised bead 118 form a fastened joint between male end 104 and female end 106. Once flexible gasket 102 is seated in raised bead 118, an attempt to separate male end 104 from female end 106 will cause flexible gasket 102 [12] to press against sidewall 118b. Because flexible gasket 102 is held at an angle, removal of male end 104 from female end 106 will be met with resistance. Thus, the male end 104 and the female end 106 are mechanically fastened together by duct joining system 100.

IN THE CLAIMS

5. (Amended) The duct joining system of Claim 1, further **[compromising] comprising** a third bead on said first duct located between said flexible seal and locking mechanism and said end of said first duct, wherein said third bead has a diameter that is less than the diameter of said first bead.

7. (Amended) A duct joining system **[that simultaneously seals and locks the joint in place consisting of] comprising:**

a first duct having a female end, said first duct having a first bead on said female end;
a flexible seal and locking mechanism retained within said female end of said first duct between said first bead and an end of said first duct; and

a second duct having a male end having a first cross sectional area and a second bead of a second cross sectional area that is less than said first cross sectional area, said second duct may be joined to the first duct by sliding said female end over said male end, said flexible seal and locking mechanism being compressed by said first cross sectional area, said flexible seal and locking mechanism expanding into said second bead to form both a seal and a mechanical lock that provides resistance to the separation of said first duct and said second duct greater than the resistance to the joining of said first duct and said second duct.

11. (Amended) The duct joining system of Claim 7, further **[compromising] comprising** a third bead on said first duct located between said flexible seal and locking mechanism and said end of said first duct, wherein said third bead has a diameter that is greater than the diameter of said first bead.

13. (Amended) A duct joining system **[that seals and locks the joint in place consisting of] comprising:**

a first duct having a male end, said first duct having a first bead on said male end;
a flexible seal and locking mechanism retained on said male end of said first duct between said first bead and an end of said first duct; and

a flexible duct that may be joined to said first duct by sliding said flexible duct over said flexible seal and locking mechanism, said flexible seal and locking mechanism expanding within said flexible duct to form both a seal and a mechanical lock that provides

resistance to the separation of said first duct and said flexible duct greater than the resistance to the joining of said first duct and said flexible duct.

16. (Amended) The duct joining system of Claim 13, further **[compromising]** **comprising** a second bead on said first duct located between said flexible seal and locking mechanism and said end of said first duct, wherein said second bead has a diameter that is less than the diameter of said first bead.

17. (Amended) The duct joining system of **[claim]** **Claim** 13, wherein said first duct is a fitting.

18. (Amended) An apparatus comprising:

a first duct;

a second duct, wherein a portion of said first duct is inserted into a portion of said second duct; and

[a sealing] means for providing a seal and a mechanical connection between said first duct and said second duct when said portion of said first duct is inserted into a portion of said second duct.

19. (Amended) The apparatus of Claim 18, wherein said second duct has a raised bead into which said **[sealing]** means is seated to form said seal and said mechanical connection when said portion of said first duct is inserted into said portion of said second duct.

20. (Amended) The apparatus of Claim 18, wherein said first duct has a depressed bead into which said **[sealing]** means is seated to form said seal and said mechanical connection when said portion of said first duct is inserted into said portion of said second duct.

21. (Amended) The apparatus of Claim 18, wherein said **[sealing]** means is a flexible gasket.

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